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SUPPLEMENT TO
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PRODUCTIVITY AND WORKING CONDITIONS IN POLISH COAL INDUSTRY

Absenteeism is a serious problem in coal mining. An absenteeism rate of 5 percent with current employment figures means a loss of 3,672,000 tons of coal annually; absenteeism in black coal mines (including sickness) amounted to 7.41 percent for 1948 and 8.71 percent for April 1949.

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Another source of waste is the time consumed in travel from portal to mine face and return. The average time consumed is 99 minutes, as follows: descent in shaft, 15 minutes; travel by rail, 17 minutes; from car to face, 19 minutes; from face to car, 18 minutes; by rail to shaft, 16 minutes; ascent in shaft, 14 minutes. With the present number employed every 5 minutes shaved off this average means 2,000 tons of coal production added daily.

The plan for 1949 calls for a saving of 18.33 percent in the consumption of raw materials, such as lumber, explosives, lubricants, etc. Savings can be effected by lowering consumption norms, reducing waste and utilizing waste products, using substitutes, reducing surplus stocks, and reorganizing the system of procurement. The Commission for Technical Standards in the Consumption of Raw Materials has been working on this problem since November 1947. A uniform consumption file has been set up to check excessive requisitions for supplies.

Lumber is an important consumption item. In 1948, coal mining consumed 23.8 cubic meters of lumber per 1,000 tons of coal extracted. It is estimated that the coal industry in 1949 will consume about 1,800,000 cubic meters of lumber. The current rate of consumption is 0.9 cubic meters less per ton of coal.

About 180 grams of explosives were consumed per ton of coal extracted in 1948. It is expected that consumption in 1949 will be reduced to 172.4 grams per ton of coal, or a 5-percent saving over 1948. This will mean a saving of 540,000 kilograms of explosives in 1949.

EMPLOYMENT AND PRODUCTIVITY -- Warsaw, Gospodarka Planowa, Sep 48

Employment and coal production in kilograms per man-day in the Polish coal industry are as follows:

<u>Yr</u>	<u>Av No of Workers</u>	<u>Production per Man-Day</u> (kg)
1938	148,822	1,580
1945	149,639	860
1946	203,000	1,004
1947	208,517	1,138
1948 (1st half)	216,600	1,205

CONDITIONS AT BRZESZCZE COAL MINE -- [Warsaw 7] 1949

Participating in work competition, Franciszek Apryas, a miner, achieved 600 percent of the established norm effective prior to 1 January 1949.

Apryas works at the Brzeszcze Mine, constructed in 1904 on a vast plain at the foot of the Beskids. In the Brzeszcze Mine area, there are 43 seams of coal from 0.7 to 1.5 meters thick, inclined at a 7—14 degree angle. The mine has a coal reserve of about 550 million tons, calculated on the basis of a 1,000-meter depth.

The working conditions in the mine are difficult because the seams are thin, making reinforcement difficult. There are numerous cracks in the seams which allow water to seep through; and, since the Brzeszcze is a gas mine, there is danger of explosion. In 1917, a new shaft was sunk in Jawiszowice, which is near Brzeszcze.

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Franciszek Apryas started mining in 1928 at the Brzeszcze Mine, which at that time was the only state-owned mine, the others all being owned by foreign capital.

When war broke out in 1939, Apryas continued to work at the mine. In 1945, when the enemy retreated, Apryas with a few friends organized an industrial guard to prevent the destruction of installations and to keep the mine going.

Being an experienced and efficient worker, he was assigned to work on seam 28, where working conditions were unusually difficult. He organized the work and increased production. Before that time, a 200-meter face was worked by 15 two-man teams, but after Apryas took over it required only eight teams.

In appreciation of his achievements, the Chief Work Competition Committee sent Apryas to Czechoslovakia on a holiday in 1948. Spurred by discussions with other workers there, he decided to achieve the highest productivity in the country. In October 1948, he achieved 362 percent of the norm and in December, 462 percent. As a result, the Brzeszcze Mine fulfilled the plan ahead of schedule. Apryas received a citation and was presented with a radio.

Apryas attributes his achievements to efficient organization of the work and full utilization of working time. He is first on the job on seam 28, 360 meters deep. The face is 200 meters long and there is a large slate content in the roof. The actual coal seam, from 0.7 to 0.9 meters thick, inclines at an angle of from 8 to 12 degrees. The work progresses in cycles; the first shift extracts the undercut coal to a depth of 1.60 meters, the second shift moves the transport equipment, and the third shift moves the iron batteries and mines the face. The reinforcement of the roof is diagonal, 2-meter beams are laid one meter apart at right angles to the face and braced by two props.

The cutting is done by a Sullivan chain cutter by the afternoon and night shifts. The cutter travels to the face in the morning shift. The coal is cut just above the base of the seam. This method of cutting has been tried on this seam for many years and found the most satisfactory considering the hardness of the coal.

The rift made by the cutter is thoroughly cleaned of the coal particles along the length of the face and 1/2-meter props, somewhat smaller in diameter than the rift, are wedged into the rift 2 or 3 meters apart to prevent it from closing by settling. Wedging of the rift prevents pressure on the arm of the cutter. It also prevents the rift from closing and facilitates cleaning in preparation for the charge. Fewer holes are required and a smaller charge is used, sufficient however to break up and loosen the undercut coal. The upper holes for the charge are drilled 20 centimeters from the roof to the depth of the undercut and spaced 3.6 meters apart. The lower holes are drilled 40 centimeters from the base of the seam to the same depth as the upper ones and spaced the same distance apart except that the lower holes are placed midway between the upper holes forming a zigzag line from top to bottom with equal obtuse angles and spacing the charges 1.8 meters apart. Since the seam exhibits no definite plane of fracture, the holes are drilled parallel to the roof and the base along the length of the seam.

In loading the charge, the direction and the length of the opening, the depth of the undercut, and the ceiling are taken into consideration. This method of drilling and blasting increases production and reduces consumption of explosives. In November 1948, 127 grams of explosives were used per ton and in December, 122 grams.

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Before the charge is exploded, all the props are strengthened, the roof is examined, coal chute couplings are checked and all necessary adjustments made to assure efficient operation throughout the day. Meanwhile, the loader loads the slack into the chute and thoroughly cleans the rift to secure a clean rift in blasting and to permit the coal to be easily lifted with a shovel and loaded on the chute.

Apryas also helps to prepare the charge. Not more than 2 meters (on both sides) are blasted and exposed at a time in order not to weaken the roof. After the blast, he helps the loader clear the coal and prepare a convenient space for reinforcing the roof by placing two timber supports. When the second blast is exploded, the loader clears the coal and Apryas follows him and cleans the area. He places the beams against the roof, holding them with his shoulder while he places the props under them. He has become so expert that he can gauge the length of the props without measuring them and requires only 4 minutes to place one set if it is necessary to cut the props. The loose rocks are cleared and put beyond the chute with the waste. The coal is placed in the chute very carefully not to impede its progress and in case of any breakdown immediate adjustments are made.

The work is so efficiently organized that in December 1948 Apryas and his loader worked more than 40 meters of face extracting 81 tons of coal per day, when the norm for both of them was only 8 meters or 12.6 tons. In addition, Apryas put up 49 beams and 98 props per day.

Full utilization of working time is the basis of work competition. Pastrowski, the initiator of work competition utilized 92 percent of working time for production; Miner Czeslaw Zielinski, 91 percent; Simko, 93 percent; Nierychlo, 94 percent; and Markiewka, 93 percent. Miners not participating in work competition utilize barely 50-70 percent.

Apryas utilizes 95 percent of the working time for production. Normally, two men work together to set up pit props. Apryas does this work alone, which results in a great saving of time.

LABOR COMPETITION TO PROMOTE MINE MECHANIZATION -- Katowice, Dziennik Zachodni, 16 Jun 50

At the beginning of June 1950, coal mines under the jurisdiction of the Rybnik Coal Association initiated labor competition programs. Workers at the "Marcel" Coal Mine, the first mine in the association to engage in labor competition, pledged to put into operation eight coal cutters.

Workers at the workshop at the "Anna" Coal Mine pledged the repair and activation of 87 various mining machines.

The "Chwalowice" Coal Mine pledged to put into operation five additional gallery chain coal cutters and three electric drills, and to repair 20 hammers and two pillar cutters. Also, 336 members of the crew pledged to increase the monthly production by 2,322 tons of coal through full utilization of new equipment.

Workers at the "Debiensko" Coal Mine pledged to increase the productivity of coal cutters by cutting the coal face 1.8 meters thick instead of 1.3 meters.

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COAL RESOURCES AND PRODUCTION FACILITIES OF DOLNY SLASK -- Wroclaw, Dolnoslaski Informator Gospodarczy, 1947

The most valuable natural resource of Dolny Slask is coal, which, unlike that of Gorny Slask, yields high-grade foundry and blast-furnace coke. In 1912, H. E. Bocker estimated deposits of black coal in the Walbrzych basin at 522 million tons, plus probable deposits of 344 million tons. In addition, the confirmed deposits of Nowa Ruda are estimated at 196 million tons, plus probable deposits of 881 million tons. In both areas the seams are thin (1.5 meters), with gas occurring frequently. Walbrzych and Nowa Ruda yield 5 percent hard coal, 40 percent bituminous coal, 45 percent cannel coal, and 8 percent gas.

Of the 966,000 tons of coke produced in Poland in 1945, 790,000 tons or 80 percent came from Dolny Slask. The sale of this coal for domestic fuel is to be banned. Gas produced as a by-product of coke serves the Sudetens, Wroclaw, Legnica, and Boleslawiec.

Seven mines are in operation; four in the Walbrzych, and three in Nowa Ruda. All are under the jurisdiction of the Dolny Slask Coal Association in Walbrzych, 4 Zamkowa Street, telephone 123.

The mines of the Walbrzych are as follows:

Bialy Kamien Mine in Bialy Kamien; includes a coke plant, a "Lofix" briquetting plant, and a power plant; director, Engineer Pawlowicz.

Victoria Mine in Sobiecin; includes a coke plant and a power plant; director, Engineer Michalski.

Bolwslaw Chrobry Mine in Walbrzych; includes a coke plant and a brickyard; director, Engineer Zewierzejew.

Mieszko Mine in Walbrzych; includes the Mieszko Coke Plant; director, Engineer Widlarz.

The Nowa Ruda area includes the following mines: Nowa Ruda Coal Mines and Clay Pits, the Jan Mine, and the Przygorze Mine. There is also a plant for firing clay. The director of the entire combine is Engineer Sielawa. The extraction of clay for refractory chamotte products amounts to 60,000 tons [annually ?].

Products of the foregoing Walbrzych and Nowa Ruda enterprises include: coal, coke, fire clay, ammonium sulfate, benzol, tar, pitch, ammonical liquor, gas, electricity, building bricks, graphite, and naphthalene.

According to prewar estimates, the probable brown coal reserves of Dolny Slask amount to 7,400,000,000 tons. German data of 1937 gave the production of ten mines near Zoraw as 977,000 tons, while mines near Luban and Wegliniec produced 600,000 tons. One of the largest mines, in Trzcinec, had a prewar output exceeding 3 million tons. Most of the mines, flooded and mined during the war, are now being reopened.

The Karol Metallurgical Plant in Walbrzych is one of two plants in Europe producing metal mine supports. A similar plant is to be activated in Gorny Slask to fill domestic and export requirements.

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